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EXAMINER	
LEE, HWA C	

ART UNIT	PAPER NUMBER
2672	5

DATE MAILED: 05/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/090,804	OBRADOR, PERE	
	Examiner	Art Unit	
	Hwa C Lee	2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26,28 and 29* is/are rejected.

7)☒ Claim(s) *27* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 March 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 2.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 27-30 been renumbered 26-29.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-4, 9-10,12-14, 17-19, 21-25, and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wyman, U.S. Patent Publication No. 2003/0112347 in view of Voss et al., U.S. Patent Publication No. 2003/0147640.

5. In reference to claim 1, Wyman teaches the following limitations:

storing with high priority the high resolution still images in raw format in a memory during acquisition of the high resolution still images

- Frames stored in buffer are stored in uncompressed format...each pixel in raw data form will require on byte of storage (paragraph [0059], lines 1-4). {Uncompressed format is in "*raw format*"}.

processing with low priority the video frames stored in the memory using a video pipeline; and

- Processing video data through a series of image processing steps specifically is a video pipeline. Wyman teaches performing A/D conversion on the images captured by sensors (Paragraph [0017]), applying jitter reduction to the captured video frames, storing said video frames in full resolution in the buffer (204), converting said same stored video frames to a lower pixel resolution by compressing the video frames, and converting the video data back to analog form before storing. (Paragraphs [0031], lines 1-14 and [0042], lines 9-14). Said steps specifically make up a video pipeline.

processing with low priority the high resolution still images acquired using a high resolution still image pipeline,

- Frames are saved by transferring the frame to an external device. This external device...can save, edit, print, and transfer, video images...having still frame recording capability (paragraph [0056], lines 6-13). Save, edit, print, and transfer are all interpreted as "*processing*" the high resolution still image. In addition, Wyman teaches an alternative of compressing the high resolution images stored in the buffer (204) in order to reduce the buffer requirement (Paragraph [0059], lines 15-24). Compression of high resolution still images specifically is image processing. Wyman also teaches a VTR state (302), wherein the stored image frames are viewed, edited, or transferred to other devices (Paragraph [0035]). Said editing the stored still images specifically is processing the still images.

wherein the high resolution still image pipeline runs concurrently with the video pipeline

- *Still frames are buffered while simultaneously recording motion video (paragraph [0063], lines 1-3). {Both the still image and video are processed in parallel}.*

6. While Wyman does not explicitly use the terms, "burst mode", said burst mode specifically is taught by Wyman.

- Wyman teaches simultaneous processing of digital video frames and high resolution still images (paragraph [0008], lines 11-14; paragraph [0028], lines 4-10; and paragraph [0035], lines 1-3).
- Since motion video in essence is comparable to a set of still images captured in "burst mode", said burst mode specifically is capturing of still images. In addition, Wyman teaches storing the uncompressed still images at a various frame rate

including a high frame rate (capturing every frame; 1 frame every 2/3 sec), which specifically is processing in a burst mode (paragraph [0007], lines 1-5 and paragraph [0037]). Capturing more than one frame per second is considered in the art to be in burst mode, while capturing more than 15 frames per second is considered video.

7. Voss clearly teaches ***"burst mode"*** and the following:

a method for concurrently processing digital video frames and high resolution still images in burst mode, comprising:

- Voss teaches the system and method of capturing and embedding high-resolution still images using a digital video recorder (paragraph [0022], lines 4-6), wherein an application specific integrated circuit (ASIC) executes the burst mode (paragraph [0024], lines 5-9).

acquiring with high priority video frames and high resolution still images in burst mode from one or more image sensors

- Voss teaches that both video capture and high-resolution still image capture are performed in burst mode (Paragraph [0024], lines 4-13; Paragraph [0039], lines 12-14).

storing with high priority the video frames and the high resolution still images in raw format in a memory during acquisition of the high resolution still images in burst mode

- Voss teaches that the high-resolution still image data is stored without any processing, and thus specifically is ***raw format*** (paragraph [0035], lines 8-10;

paragraph [0036], lines 1-8; paragraph [0037], lines 1-19; and paragraph [0038], lines 4-7).

processing with low priority the high resolution still images acquired during the burst mode using a high resolution still image pipeline

- Voss teaches that the analog-to-digital converter converts the analog signal received from the image sensor into a digital signal and provides this digital signal as image data via connection to the ASIC for image processing (paragraph [0027], lines 4-7).

8. It would have been obvious to take the teachings of Wyman and to add the capabilities of burst mode capturing of high resolution still images and separate pipelines for video frames and still images as taught by Voss et al. in order to gain the advantage of being able to capture high resolution still images without losing any video information, and because this allows for a more flexible acquisition of images and to let the user to perform additional operations. Thus, both video frames and still image frames are captured in real time without sacrificing either format. In addition, the user is able to switch between still image capture mode and video frame capture mode, and thus memory won't be filled up as quickly if both video and still images were captured simultaneously. Further, both references are directed to processing video and still images concurrently.

9. In reference to claim 2, Wyman and Voss et al. teach all limitations of claim 1 as described above. In addition, Wyman teaches ***wherein the acquiring step includes acquiring the video frames and the high resolution still images in real time***

- Video frames are held in the buffer for a limited time because the images are captured and stored in real time. The buffer must be purged to make room for the next real time images (Paragraph [0007], lines 1-8).
- Continuously saved video means that there are no delays between recordings and since the images are taken from the video, interpreted as acquiring in ***real time*** (Paragraph [0008], lines 1-3).

10. In reference to claim 3, the same basis and rationale for claim rejection as applied to claim 2 are applied.

11. In reference to claim 4, Wyman in view of Voss et al. teach all limitations of claim 1 as described above. In addition, Wyman teaches ***further comprising down sampling the high resolution still images to be inputted into the video pipe line.***

- Converting the frame, the high-resolution still image, to a lower pixel resolution video format is specifically "*down sampling*". Down sampling allows fast and efficient transfer to video format with minimum space requirement (Paragraph [0042], lines 9-14).

12. In reference to claim 8, Wyman in view of Voss et al. teach all limitations of claim 1 as described above. In addition, Wyman teaches the limitation of ***further comprising compressing the video frames and the high resolution still images***.

- The frame is then converted to motion video format and written to the motion video media. Specifically, motion video format implies that the frame is converted to a lower pixel resolution. It may additionally be compressed using any appropriate compression algorithm (paragraph [0042], lines 9-14).

- It would have been obvious to someone of ordinary skill in the art to combine the teachings of Wyman and Voss et al. in order to gain the advantages of compressing the video frames and high resolution still images which minimizes memory space requirement for storage.

13. In reference to claim 9, the basis for the claim rejection is the same as described for claim 1 above.

14. In reference to claim 10, the basis for the claim rejection is the same as described for claim 4.

15. In reference to claim 12, the basis for the claim rejection is the same as described for claims 2 and 3.

16. In reference to claim 13, the basis for the claim rejection is the same as described for claim 1.

17. In reference to claim 14, Wyman in view of Voss et al. teach all limitations of claim 9 as described above. In addition, Wyman and Voss et al. in combination teach ***wherein the processors are selected from a microprocessor and an application specific integrated circuit (ASIC)***.

- Wyman teaches that the camera includes a programmable processor in communication with a random access memory (paragraph [0019], lines 3-4). Wyman describes a method to capture high-resolution still photographs, and thus a programmable processor is a microprocessor.
- Voss et al teaches that the digital camera is a digital video recorder that includes an application specific integrated circuit (ASIC) (paragraph [0024], lines 4-5).

- Voss et al also teaches that aspects of the invention can be embodied in software that is stored in the internal flash memory and executed by a suitable microprocessor (paragraph [0025], lines 7-9).

18. In addition, the limitation of a digital signal processor (DSP) is well known in the art. Processing a digital image or motion video to adjust the picture quality and or data size involves a use of a digital signal processor. It would have been obvious to combine the teachings of Wyman and Voss et al. and to add a processor selected from a microprocessor, ASIC, and DSP in order to gain the following advantages:

- The microprocessor controls all functions of the camera.
- ASIC performs specific application as instructed by the microprocessor.
- DSP controls processing of high-resolution still image and motion video.
- Selecting from the above processors improves efficiency since individual processors have specific functions and thus can run in parallel with each other.

19. In reference to claim 17, both Wyman and Voss et al. teach ***a computer readable medium providing instructions for concurrently processing digital video frames and high resolution still images in burst mode.***

- Wyman teaches that the camera includes a programmable processor in communication with a random access memory. Memory contains a control program comprising a plurality of processor executable instructions which, when executed on processor, control the operation of camera (paragraph [0019], lines 3-8). Random access memory is a computer readable medium providing the said instructions of claim 17.

- Voss et al teaches a "computer –readable medium", which can be any means that can contain, store, communicate, propagate, or transport the program for use by or in connection with...device (paragraph [0023], lines 13-16). In addition, aspects of the invention can be embodied in software that is stored in the internal flash memory and executed by a suitable microprocessor (paragraph [0025], lines 7-9).
- The remaining limitations of claim 17 are rejected using the same basis described for claim 1 above.

20. In reference to claim 18, the basis for the claim rejection is the same as described for claim 2.

21. In reference to claim 19, the basis for the claim rejection is the same as described for claim 4.

22. In regards to claim 21, the same basis and rationale for claim rejection as applied to claim 1 are applied.

A method of processing image data captured by a digital video camera, comprising: acquiring image frames from an image sensor; in a non-burst-mode of operation, processing acquired image frames using a video pipeline to compress acquired images to a video resolution level and storing the compressed image frames in a burst mode of operation, storing acquired image frames in a memory at a still image resolution level higher than the video resolution level, wherein at least one of the uncompressed image frames is designated a still image frame and other uncompressed image frames are

designated video image frames; processing the still image frames stored in the burst mode of operation using a still image pipeline; and processing the video image frames stored in the burst mode of operation using the video pipeline.

23. In regards to claim 22, Wyman teaches the following:

The method of claim 21, wherein the compressed image frames stored in the non-burst mode of operation are stored in a continuous memory sequence in the non-burst mode of operation.

- Wyman teaches storing compressed images in the buffer (204) (Paragraph [0059], lines 15-20), and incrementing the buffer each time the next image frame is stored in the buffer (Paragraph [0044]-[0045] and FIG. 5A, No. 512).

24. In regards to claim 23, the same basis and rationale for claim rejection as applied to claim 22 are applied.

The method of claim 22, further comprising marking memory location in the continuous memory sequence corresponding to the burst mode of operation.

25. In regards to claim 24, Wyman teaches the following:

The method of claim 23, wherein image frames are stored in the burst mode of operation in the memory at locations separate from the continuous memory sequence.

- Wyman teaches two types of buffer address, BuffH (high resolution) and BuffL (low resolution). BuffH can be designated for burst mode for storing high resolution still images and BuffL can be designated for non-burst mode for low resolution video data.

- In addition, Wyman teaches recording low resolution video data in video media (Paragraph [0042]) and transferring the image frames to permanent storages (Paragraph [0056]).

26. In regards to claim 25, the same basis and rationale for claim rejection as applied to claim 24 are applied.

The memory of claim 24, wherein marking the memory locations comprises inserting in the continuous memory sequence pointer to respective memory locations where image frames acquired in the burst mode of operation are stored.

27. In regards to claim 28, the same basis and rationale for claim rejection as applied to claim 21 are applied.

The method of claim 21, wherein processing the video image frames stored in the burst mode of operation comprises generating a compressed sequence of image frames at the video resolution level from still image frames and video image frames stored in the memory in the burst mode of operation.

- As applied to claims 1 and 17, and 21 above, Wyman teaches taking the image data captured by the sensor, which has been A/D converted and jitter reduction applied, and storing the image data at various frame rates (including burst mode) in the buffer. The same image data stored in the buffer in further converted to a lower resolution video format, which is then compressed. Thus said compressed video data specifically is a compressed sequence of image frames at the video resolution level, which is generated from still image frames (image data stored in buffer) and video image frames (image data converted to motion video format).

28. In regards to claim 29, the same basis and rationale for claim rejection as applied to claims 24 and 28 are applied.

The method of claim 28, wherein generating the compressed sequence of image frames comprises storing the compressed sequence of image frames at a memory location separate from where the image frames are stored in the non-burst-mode of operation.

29. Claims 5, 11, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wyman in view of Voss et al. as applied to claims 1-4, 9-10, 12-14, 17-19 above, and further in view of Matsumoto, U.S. Patent Publication No. 2003/0052986.

30. In regards to claim 5, Wyman in view of Voss et al. teach all limitations of claim 1 as described in paragraph 4 above but do not explicitly teach ***wherein the processing the high resolution still images step includes processing the video frames and high resolution still images into a standard format by an image/video transcoding agent.*** Matsumoto teaches the said limitations.

- Matsumoto teaches capturing both still image and video frames, wherein said still image and video frames are processed with an apparatus comprising still image codec unit (102), moving image codec unit (103), CPU (101), image processing unit (104), ROM (106), RAM (107), LCD control unit (111), and data storage unit (108). Said image processing apparatus specifically reads on video and still image pipeline hardware as disclosed by the applicant as applied to claim 1 above.

- The still image codec unit includes a JPEG encoder for generating JPEG still image data by executing a JPEG compression process for still image data obtained by the camera unit and image processing unit (paragraph [0041], lines 1-5). Still images are processed into a standard JPEG format.
- The moving image codec unit includes an MPEG encoder for generating MPEG moving image data by executing an MPEG compression process for moving image data obtained by the camera unit and image processing unit (paragraph [0042], lines 1-5).
- In addition, image processing further comprises A/D conversion (Paragraph [0039]), gamma conversion, color space conversion, white balance, AE, and flash correction (Paragraph [0040]).

31. It would have been obvious to someone of ordinary skill in the art to take the teachings of Wyman in view of Voss et al. and to add from Matsumoto the capability of processing the still images and video frames into standard format in order for the data to be easily recognized and displayed by plurality of display apparatus. This allows the images on video to be accessed and displayed using conventional programs like Adobe © Photoshop and Windows © Media Player, for example.

32. In reference to claim 11, the basis for the claim rejection is the same as described for claim 5.

33. In reference to claim 20, the basis for the claim rejection is the same as described for claim 5.

34. Claims 6-8, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wyman in view of Voss et al. as applied to claims 1-4, 9-10, 12-14, 17-19 above, and further in view of Bittner et al., U.S. Patent No. 6,330,400.

35. In reference to claim 6, Wyman in view of Voss et al. teach all limitations of claim 1 as described above, wherein the video frames are downsampled as applied to claim 4 above, but do not explicitly teach ***wherein the processing the video frames step comprises: demosaicing the video frames; and color correcting the video frame.***

36. Bittner et al. teach the said limitation in the following:

- The ASIC is structured to perform the desired image processing functions including, but not limited to:
    1. Demosaic;
    2. Color correction, compensation and other image quality improvement;

    .
    .
    .
    7. Image compression

    (Col. 10, lines 35-49) {Image compression is "*downsampling*"}.

37. It would have been obvious to someone of ordinary skill in the art to take the teachings of Wyman in view of Voss et al. and to add from Bittner et al., a processing step comprising: "*downsampling and demosaicing the video frames; and color correcting the video frames*" in order to gain the following advantages:

- Downsampling allows conversion of the high-resolution images into lower resolution motion video;

- Demosaicing allows true reproduction of original image colors; and
- Color correcting the demosaiced video frames allows color correction based on the original illumination of the image when recorded.

38. In reference to claims 7-8, the same basis and rationale for claim rejection as applied to claim 6 above are applied.

39. In reference to claims 15-16, the basis for the claim rejection is the same as described for claims 6-9 are applied.

40. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wyman in view of Voss et al. as applied to claims 1-4, 9-10,12-14, 17-19, 21-25, and 28-29, and further in view of Wong et al.

41. In regards to claim 26, Wyman in view of Voss et al. teach the method of claim 25, wherein the images are processed using a pipeline, but do not explicitly teach ***further comprising processing image frames acquired in the burst mode of operation using the video pipeline to generate a burst video sequence***.

42. Wong et al. teaches capturing images in burst mode (Paragraph [0036]), wherein the captured images are written in non-volatile memory using a plurality of write pipelines (Paragraph [0038] and FIG. 3), which specifically is a video pipeline. In addition, Wong et al. teaches converting the image data stored in memory to a video format in order to display the stored images as video. Since said image data was captured in burst mode, the video generated from said burst image frames specifically is a burst image sequence.

43. It would have been obvious to one of ordinary skill in the art to take the teachings of Wyman and Voss, and to add from Wong et al. a digital imaging system, which incorporates a nonvolatile high density, high speed analog/multi-level memory to quickly store a large amount of image data from an image sensor, The stored analog data is then held in the analog/multi-level memory and transmitted in portions to image processing and compression circuits. As a result, sustained high speed image capture is possible because the rate and duration of the image capture is no longer limited by the low speed constraints of image processing and compression. In addition, all references are directed to capturing both still images and video data.

Allowable Subject Matter

44. Claim 27 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

45. Applicant's arguments filed 02/17/2004 have been fully considered but they are not persuasive. The applicant argues for allowance because the applicant believes (pages 7-15.) that Wyman fails to teach processing stored images using a video pipeline as applied to independent claims 1, 9 and 17. In regards to the dependent claims, 2-8, 10-16, and 18-20, the applicant argues for allowance because of the same

reasoning as applied to the independent claims and since the dependent claims depend on the independent claims. Said arguments are not persuasive because Wyman clearly teaches processing stored image frame using a video pipeline.

46. Wyman teaches capturing and processing both still images and video frames concurrently. Although, Wyman does not explicitly use the term "***video pipeline***", Wyman's invention clearly comprises capturing video frames applying a series of processing steps to said video frames, which specifically is processing video frames using ***video pipeline***. First, FIG. 1 represents a video camera comprising an optical sensor (103), which comprises a plurality of conventional charge couple device (CCD) arrays. Said CCD senses the image and converts the sensed image to an electrical signal, which specifically is an A/D converter. Said digital camera further comprises an electronic controller card (104), which contains a programmable processor and other electronic components, which controls the operations of the camera. Said video images captured by the sensor are eventually displayed to the user on a display (Paragraph [0017]). Thus, the first step of video processing using a ***video pipeline*** specifically is A/D conversion performed by the optical sensor.

47. Next, FIG. 2 illustrates the major electronic components of the video camera, wherein said video camera comprises a programmable processor (201) in communication with a RAM (202). The memory (202) contains a control program (203) comprising a plurality of processor executable instructions for controlling the operations of the camera by the processor. The memory further contains a frame aging buffer (204) for temporary storage of digital images. The processor further communicates with

the sensor for capturing digital images, storage media interface for storing said digital images, device driver for controlling various camera components, and I/O port controller (Paragraph [0019]). After the video images are captured and A/D converted, said video images are subjected to jitter reduction process using a special auxiliary processor (Paragraph [0042], lines 1-7). Said jitter reduction process specifically is the second video processing step of the ***video pipeline***. Said jitter reduced video images are written to the buffer (204) in full (high, ~3M pixel) resolution. Then the same buffered images are converted to motion video format (conversion to a lower pixel resolution) and written to the motion video media (110). Said converted motion video format is additionally compressed and stored in analog form (Paragraph [0042], lines 8-17). Said conversion to motion video format, compression and storing in analog form specifically are the third, fourth, and fifth steps of the ***video pipeline***.

48. Clearly, the same video image data, which are stored in the buffer (204) are processed using the ***video pipeline***, and thus reads on the applicant's claim 1 as currently written, ***"processing with low priority the video frames stored in the memory using a video pipeline"***. Thus, claim 1 as currently written, only claims processing the video image data stored in memory using ***video pipeline***, and does not claim reading the video image data stored in memory and processing said read video image data using ***video pipeline***. However, even if claim 1 were amended to read, ***"processing with low priority the video frames read from memory using a video pipeline"***, the functionality of the invention would not change. Both versions of claim 1 would produce the same functional effect, which is to process the same video image

data using ***video pipeline***. Further, Wyman clearly teaches editing the images stored in buffer and saving said images using the VTR state (Paragraphs [0034] and Paragraph [0053). Said editing the images clearly is a processing function. Thus, the applicant's assertion that Wyman only teaches saving or transferring selected frames stored in buffer is not persuasive. Wyman clearly reads on the claim limitations of processing video image stored in memory using video pipeline.

49. In light of the above response to the applicant's argument regarding claim 1, the examiner's original claim rejection is maintained. Since all other arguments against the claim rejections regarding the remaining independent and dependent claims are the same as applied to claim 1, the examiner's original claim rejections regarding claims 2-20 are also maintained.

Conclusion

50. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following prior arts teach the limitation of capturing still images and video data using the same invention.

U.S. Patent Publication No.	Inventor(s)
6,292,218	Parulski et al.

The following prior arts teach the limitation of capturing images in burst and non-burst modes in a digital camera using pipeline image processing.

U.S. Patent Publication No.	Inventor(s)

6,563,535	Anderson
5,991,465	Anderson et al.

The following prior arts teach the limitation of parallel pipeline image processing, wherein two or more pipelines can be used to process images.

U.S. Patent Publication No.	Inventor(s)
4,484,349	McCubbrey
5,287,416	Capo et al.
5,046,190	Daniel et al.
5,022,090	Masaki et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hwa C Lee whose telephone number is 703-305-8987. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Mancuso can be reached on 703-305-3885. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-9700.

Hwa C Lee
Examiner
Art Unit 2672

HCL
04/28/04